

STEVEN L. BESHEAR **GOVERNOR** 

# **ENERGY AND ENVIRONMENT CABINET**

**LEONARD K. PETERS SECRETARY** 

DEPARTMENT FOR ENVIRONMENTAL PROTECTION **DIVISION OF WATER** 200 FAIR OAKS LANE FRANKFORT, KENTUCKY 40601 www.kentucky.gov

# FACT SHEET

# KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT TO DISCHARGE TREATED WASTEWATER INTO WATERS OF THE COMMONWEALTH

KPDES No.: KY0080764 Permit Writer: Diana Davidson Date: December 18, 2009

AI No.: 1668

### 1. SYNOPSIS OF APPLICATION

Name and Address of Applicant a.

> Pilot Travel Centers, LLC 5508 Lonas Road Knoxville, Tennessee 37909

Facility Location b.

> Pilot Travel Center No. 048 58 Glendale-Hodgenville Road Glendale, Hardin County, Kentucky

Description of Applicant's Operation c.

Auto / Truck Fueling Station

d. Production Capacity of Facility

N/A

Description of Existing Pollution Abatement Facilities

Outfall 001: Grease Trap, Surge Tanks, Aerobic/Anaerobic Clarifier, Recirculation Filters, and UV Disinfection Unit

Outfall 002: Oil/Water Separator and Sedimentation



KPDES No.: KY0080764 AI No.: 1668

Fact Sheet Page 2

### f. Permitting Action

This is a reissuance of a minor KPDES permit for a wastewater treatment plant serving a retail facility for sales of gasoline and diesel fuel, convenience market, fast food restaurant, and other amenities.

### 2. **RECEIVING WATER**

a. Name/Mile Point

Facility discharges to an unnamed tributary to Jackson Branch of Nolin River at latitude 37° 35′ 50″ and longitude 85° 51′ 50″.

b. Stream Segment Use Classification

Pursuant to 401 KAR 10:026, Section 5, the unnamed tributary to Jackson Branch of Nolin River carries the following classifications:

Warm Water Aquatic Habitat, Primary/Secondary Contact Recreation, and Domestic Water Supply.

c. Stream Segment Categorization

Pursuant to 401 KAR 10:030, Section 1, the unnamed tributary to Jackson Branch of Nolin River is categorized as a High Quality Water.

d. Stream Low Flow Condition

The 7-day, 10-year low flow and harmonic mean conditions of the unnamed tributary to Jackson Branch of Nolin River are 0.0 and unknown cfs, respectively.

KPDES No.: KY0080764

AI No.: 1668
Fact Sheet Page 3

### 3. REPORTED DISCHARGE AND PROPOSED LIMITS

Description of Discharge - Outfall 001 - (Internal Outfall) - Sanitary Wastewater

| Effluent<br>Characteristics   | Reported I<br>Monthly<br>Average | Discharge<br>Daily<br>Maximum | Proposed Limits Monthly Daily Average Maximum | Applicable Water Quality<br>Criteria and/or Effluent<br>Guidelines                |
|-------------------------------|----------------------------------|-------------------------------|---|---|
| Flow                          | 0.0147                           | 0.0147                        | Report Report                                 | 401 KAR 5:065, Section 2(8)   |
| $BOD_5 (mg/l)$                | 7.91                             | 7.91                          | 30 45   | 401 KAR 10:031, Section 4<br>401 KAR 5:045, Sections 3 and 5                      |
| Total Suspended Solids (mg/l) | 8.33                             | 8.33                          | 30 45   | 401 KAR 10:031, Section 4<br>401 KAR 5:045, Sections 2 and 3                      |
| pH (standard units)           | 7.10                             | 8.20                          | 6.0 (min) 9.0 (max                            | 401 KAR 10:031, Section 4   |
| Fecal Coliform (N/100 ml)     | 24.72                            | 24.72                         | Removing from permit                          | 401 KAR 10:031, Section 7<br>401 KAR 5:045, Section 4<br>401 KAR 5:080, Section 2 |
| Escherichia Coli (N/100 ml)   | NR                               | NR                            | 130 240                                       | 401 KAR 10:031, Section 7<br>401 KAR 5:045, Section 4<br>401 KAR 5:080, Section 2 |

The data in the Reported Discharge columns for Outfall 001 were determined from the analysis of the DMR reported results from the previous permit.

The abbreviation BDL means below detectable limit, NR means Not Reported on the DMRs and N/A means Not Applicable.

KPDES No.: KY0080764

AI No.: 1668 Fact Sheet Page 4

### 3. REPORTED DISCHARGE AND PROPOSED LIMITS

Description of Discharge - Outfall 002 - Total Facility discharge consisting of truck rinsing, fuel island cleaning, storm water runoff, and sanitary wastewater (Internal Outfall 001)

| Effluent<br>Characteristics   | Reported Di<br>Monthly<br>Average | ischarge<br>Daily<br>Maximum | Proposed Monthly Average | Limits<br>Daily<br>Maximum | Applicable Water Quality<br>Criteria and/or Effluent<br>Guidelines |
|---|-----------------------------------|------------------------------|--------------------------|----------------------------|--|
| Flow (MGD)  | 0.0143                            | 0.0143                       | N/A                      | N/A                        | 401 KAR 5:065, Section 2(8)  |
| Total Suspended Solids (mg/l)   | 9.83                              | 9.83                         | 30                       | 45                         | 401 KAR 10:031, Section 4<br>401 KAR 5:045, Sections 2 and 3       |
| Ammonia Nitrogen (as mg/l N)<br>May 1 - October 31<br>November 1 - April 30 | 28.48<br>21.03                    | 28.59<br>2.16                | <b>4</b> .0              | 6.0<br>15                  | 401 KAR 10:031, Section 4<br>401 KAR 5:045, Sections 3 and 5       |
| Oil and Grease (mg/l)   | 7.48                              | 7.48                         | 10                       | 15                         | 401 KAR 5:080, Section 2   |
| Phenanthrene (µg/l)   | 8.12                              | 8.12                         | Report                   | Report                     | 401 KAR 5:080, Section 2   |
| Benzene (µg/l)  | 3.90                              | 3.90                         | Removing for             | r permit                   | 401 KAR 5:080, Section 2   |
| Flourene (µg/l)   | 8.50                              | 8.50                         | Removing fr              | om permit                  | 401 KAR 5:080, Section 2   |
| pH (standard units)   | 6.90                              | 8.20                         | 6.0 (min)                | 9.0 (max)                  | 401 KAR 10:031, Section 4<br>401 KAR 5:045, Section 4              |
| Dissolved Oxygen (mg/l) (minimum)   | 7.32                              | N/A                          | Not less t               | han 7.0                    | 401 KAR 10:031, Section 4<br>401 KAR 5:045, Sections 3 and 5       |

The data in the Reported Discharge columns for Outfall 001 were determined from the analysis of the DMR reported results from the previous permit.

The abbreviation N/A means Not Applicable.

### 4. METHODOLOGY USED IN DETERMINING LIMITATIONS

### a. Serial Number

Outfall 001 - Sanitary Wastewater (Internal Outfall) Outfall 002 - Total Facility Discharge

## b. Effluent Characteristics

Outfall 001: Flow, Total Suspended Solids,  $CBOD_5$ , Fecal Coliform Bacteria, Escherichia Coli and pH

Outfall 002: Flow, Total Suspended Solids, Ammonia Nitrogen, Oil and Grease, Phenanthrene, Benzene, Flourene, pH, and Dissolved Oxygen.

### c. Pertinent Factors

Steady State Toxics Wasteload Allocation Model (SSTWAM2004) was performed on the discharge of Outfall 002 to determine the reasonable potential of pollutant concentrations to cause or contribute to an excursion of any water standard. A Reasonable Potential Analysis is performed by first calculating the expected effluent limitations for those pollutants with water quality criteria. The calculated limits are then compared to the concentrations reported on the KPDES permit application and/or a summarization of the values reported on the Discharge Monitoring Report (DMRs) submitted during the term of the permit. This comparison is made by dividing the reported value by the calculated effluent limitation and converting to a percentage.

The following criteria are used in determining how the pollutant will be addressed in the permit. If the reported concentration is less than 70% of the calculated effluent limit then no monitoring or limitations will be required.

If the reported concentration is equal to or greater than 70% but less than 90% of the calculated effluent limit then monitoring will be required.

If the reported concentration is equal to or greater than 90% and the number of analysis reported on the KPDES permit application is less than 12 then monitoring will be required.

If the reported concentration is equal to or greater than 90% and the number of analysis reported on the KPDES permit application is equal or greater than 12 then an effluent limitation will be required.

The findings of this analysis showed the reported concentrations of Monthly Average and Daily Maximums for Benzene and Flourene to be less than 70% of the calculated effluent limit (see Factsheet Attachment A, Pages A5 & A7 for SSTWAM results). Therefore in accordance with 401 KAR 5:080, Section 2(3) the Division of Water excercises "Best Professional Judgment" in the removal of the monitoring requirements for these pollutants from the permit.

### d. Monitoring Requirements

Flow monitoring shall be conducted once per month instantaneously.

Total Suspended Solids and Ammonia Nitrogen shall be monitored once per month by 24 hour composite sampling.

Oil & Grease, Benzene, Phenanthrene, Flourene, Dissolved Oxygen, and pH shall be monitored once per month by grab sample.

## e. Justification of Conditions

The Kentucky regulations cited below have been duly promulgated pursuant to the requirements of Chapter 224 of the Kentucky Revised Statutes.

### Outfall 001

### Flow

The monitoring requirements for this parameter are consistent with the requirements of 401 KAR 5:065, Section 2(8).

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The limits for these parameters are consistent with the requirements of 401 KAR 10:031, Section 4 and 5:045, Section 4. Section 4 of 10:031 establishes water quality criteria for the protection of Kentucky's waters. Section 4 of 5:045 establishes the acceptable levels of these parameters for biochemically degradable wastewaters.

## Escherichia Coli and Fecal Coliform Bacteria

The limits for Escherichia Coli are consistent with the requirements of 401 KAR 10:031, Section 7, 401 KAR 5:045 Section 4 and 401 KAR 5:080, Section 2. The removal of Fecal Coliform Bacteria is consistent with the requirements of 401 KAR 5:080 Section 2. Although Fecal Coliform Bacteria has been used as an indicator of fecal contamination, it does contain other species that are not necessarily fecal in origin. EPA recommends Escherichia Coli, which is specific to fecal material from warm-blooded animals, as the best indicator of health risk from contact with recreational waters. Therefore, it is the "Best Professional Judgment "BPJ" of the Division of Water that Escherichia Coli replace Fecal Coliform Bacteria on this permit.

# Carbonaceous Biochemical Oxygen Demand (5-day)

The limits for these parameters are consistent with the requirements of 401 KAR 10:031, Section 4, and 401 KAR 5:045, Sections 3 and 5. Section 4 of 5:031 establishes water quality criteria for the protection of Kentucky's waters. Section 5 of 5:045 requires biochemically degradable wastewaters to receive treatment in excess of secondary treatment if the Cabinet determines that the receiving water would not satisfy applicable water quality standards as a result of a facility discharge or discharges from multiple facilities.

# Total Suspended Solids

The limits for this parameter are consistent with the requirements of 401 KAR 10:031, Section 4 and 5:045, Sections 2 and 3. Section 4 of 10:031 establishes water quality criteria for the protection of Kentucky's waters. Sections 2 and 3 of 5:045 require biochemically degradable wastewaters to receive secondary treatment.

### Outfall 002

### Flow

The monitoring requirements for this parameter are consistent with the requirements of 401 KAR 5:065, Section 2(8).

рΗ

The limits for these parameters are consistent with the requirements of 401 KAR 10:031, Section 4 and 5:045, Section 4. Section 4 of 10:031 establishes water quality criteria for the protection of Kentucky's waters. Section 4 of 5:045 establishes the acceptable levels of these parameters for biochemically degradable wastewaters.

### Total Suspended Solids

The limits for this parameter are consistent with the requirements of 401 KAR 10:031, Section 4 and 5:045, Sections 2 and 3. Section 4 of 10:031 establishes water quality criteria for the protection of Kentucky's waters. Sections 2 and 3 of 5:045 require biochemically degradable wastewaters to receive secondary treatment.

### Oil & Grease

The limits for this parameter are consistent with the requirements of 401 KAR 5:080, Section 2(3). The limits are representative of the Division of Water's "Best Professional Judgment" (BPJ) determination of the "Best Conventional Pollutant Control Technology" (BCT) requirements for these pollutants.

# Ammonia Nitrogen, pH, and Dissolved Oxygen

The limits for these parameters are consistent with the requirements of 401 KAR 10:031, Section 4, and 401 KAR 5:045, Sections 3 and 5. Section 4 of 5:031 establishes water quality criteria for the protection of Kentucky's waters. Section 5 of 5:045 requires biochemically degradable wastewaters to receive treatment in excess of secondary treatment if the Cabinet determines that the receiving water would not satisfy applicable water quality standards as a result of a facility discharge or discharges from multiple facilities.

# Fluorene, Benzene, and Phenanthrene

The limits for these parameters are consistent with the requirements of 401 KAR 5:080, Section 2(3). The limits are representative of the Division of Water's "Best Professional Judgment" (BPJ) determination of the "Best Available Technology Economically Achievable" (BAT) requirements for these pollutants.

### 5. ANTIDEGRADATION

The conditions of 401 KAR 10:029, Section 1 have been satisfied by this permit action. Since this permit action involves reissuance of an existing permit, and does not propose an expanded discharge, a review under 401 KAR 10:030 Section 1 is not applicable.

### PROPOSED COMPLIANCE SCHEDULE FOR ATTAINING EFFLUENT LIMITATIONS 6.

The permittee will comply with all effluent limitations by the effective date of the permit.

### PROPOSED SPECIAL CONDITIONS WHICH WILL HAVE A SIGNIFICANT IMPACT ON THE DISCHARGE 7.

Best Management Practices (BMP) Plan

Pursuant to 401 KAR 5:065, Section 2(10), a BMP requirement shall be included: to control or abate the discharge of pollutants from ancillary areas containing toxic or hazardous substances or those substances which could result in an environmental emergency; where numeric effluent limitations are infeasible; or to carry out the purposes and intent of KRS 224. The facility has several areas where support activities occur which have a potential of the discharge of such substances through storm water runoff or spillage. Some of these areas will drain to present wastewater treatment plants, others will not.

# Outfall Signage

It is the Best Professional Judgment of the Division of Water, 401 KAR 5:080, Section 2(3), that all permittees post a marker at all discharge locations and/or monitoring points. The marker shall be of sufficient size to display the Permittee Name, KPDES permit and outfall numbers in 2 inch letters and shall be prominently displayed. For internal monitoring points the marker shall be of sufficient size to include the outfall number in 2 inch letters and is to be posted as near as possible to the actual sampling location.

### 8. PERMIT DURATION

Five (5) years. This facility is in the Tradewater, Green Basin Management Unit as per the Kentucky Watershed Management Framework.

#### 9. PERMIT INFORMATION

The application, draft permit, fact sheet, public notice, comments received, and additional information is available from the Division of Water at 200 Fair Oaks Lane, Frankfort, Kentucky 40601.

### REFERENCES AND CITED DOCUMENTS 10.

All material and documents referenced or cited in this fact sheet are a part of the permit information as described above and are readily available at the Division of Water Central Office. Information regarding these materials may be obtained from the person listed below.

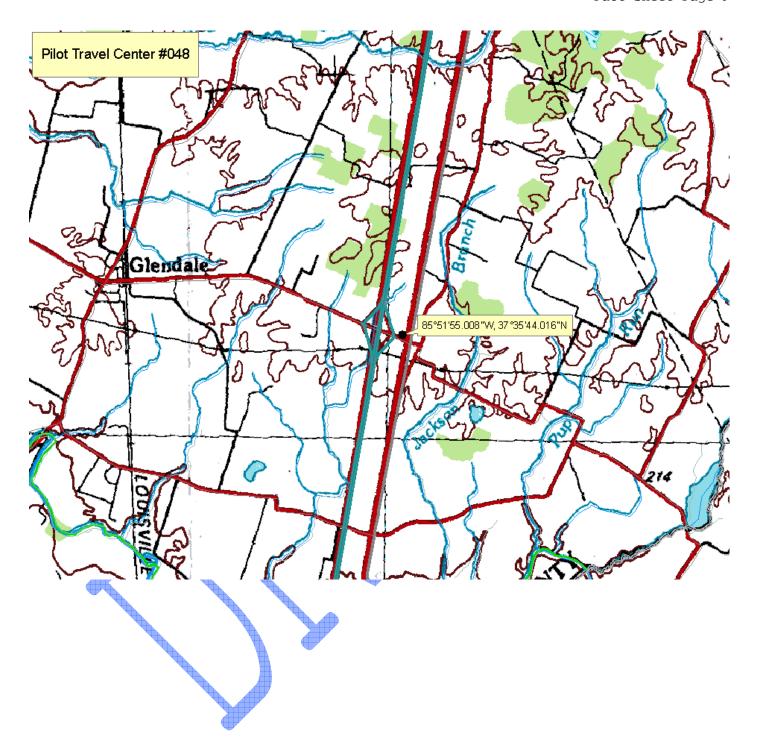
# 11. CONTACT

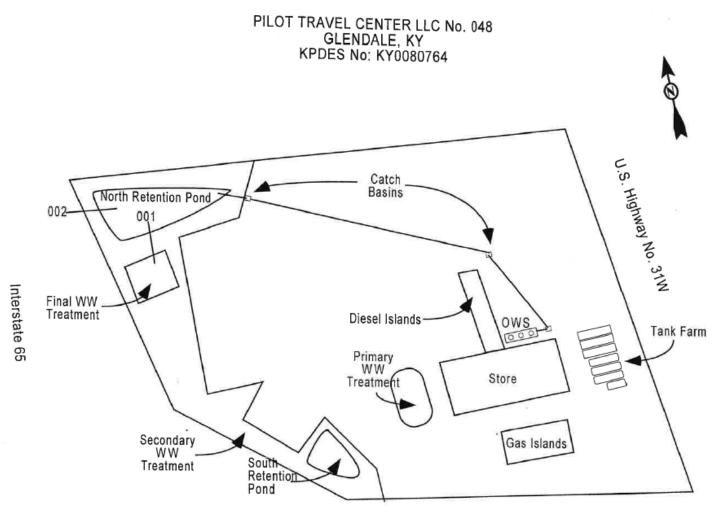
For further information on the draft permit or comment process, contact the individual identified on the Public Notice or the Permit Writer - Diana Davidson at (502) 564-8158, extension 4901, or email Diana.Davidson@ky.gov.

# 12. PUBLIC NOTICE INFORMATION

Please refer to the attached Public Notice for details regarding the procedures for a final decision, deadline for comments and other information required by 401 KAR 5:075, Section 4(2)(e).







Kentucky Highway No. 222

Permit No.: KY0080764 AI No.: 1668 Fact Sheet Attachment A Page A - 1

| Permit Writer Date Entered   | Diana Davidson<br>11/24/09                |                 |
|--|---|-----------------|
| Facility Name  | Pilot Travel Center<br>No. 048            |                 |
| KPDES Number Outfall Number  | KY0080764<br>002                          |                 |
| Case   | Reissuance                                |                 |
| Status:<br>Is this an existing facility – Enter "E"  |   |                 |
| Is this an existing facility with an increase in pollutant load – Enter "I" Is this a new facility – Enter "N"   |   |                 |
| Is this a regional facility with an approved up-to-date 201 plan – Enter "R"   |   |                 |
| Has the permittee made a successful alternatives analysis/socioeconomic demonstration – Enter "A"  | Ε   |                 |
| Receiving Water Name   | UT to Jackson<br>Branch of Nolin<br>River |                 |
| Discharge Mile Point   | 0.7                                       |                 |
| Public Water Supply Name   | N/A                                       |                 |
| Intake Water Name  | Hardin County<br>Water District           |                 |
| Intake Mile Point  | 80.5                                      |                 |
| Total Effluent Flow (Q <sub>T</sub> )  | 0.015                                     | MGD             |
| Receiving Water 7Q10 (Q <sub>RW7Q10</sub> )  | 0.1                                       | cfs             |
| Receiving Water Harmonic Mean (Q <sub>RWHM</sub> )   | 0.1                                       | cfs             |
| Receiving Water pH   | 7.5                                       | SU              |
| Receiving Water Temperature  | 20.00                                     | °C              |
| Intake Water 7Q10 (Q <sub>IW7Q10</sub> )   | 38  | cfs             |
| Intake Water Harmonic Mean (Q <sub>IWHM</sub> )  | 149                                       | cfs             |
| Effluent Hardness  | 162                                       | (as mg/l CaCO3) |
| Receiving Water Hardness   | 100                                       | (as mg/l CaCO3) |
| Zone of Initial Dilution (ZID)   | 1   |                 |
| Mixing Zone (MZ)   | 0.0                                       |                 |
| Acute to Chronic Ratio (ACR)   | 0.1                                       |                 |
| Impaired Control of the Control of t | No  |                 |
| Permittee agrees to accept no mixing zone for bioaccumulative or persistent pollutants prior to 09/08/2014   | Yes                                       |                 |

AI No.: 1668

Fact Sheet Attachment A

Page A - 2

# STEADY STATE TOXICS WASTELOAD ALLOCATION MODEL (SSTWAM2004) - REASONABLE POTENTIAL ANALYSIS - OUTFALL 002

### **Calculation Methodology**

### **Definitions**

| ACR        | Total Effluent Flow   | $Q_T$   |
|------------|---|---|
| $C_A$      | Receiving Water 7Q10  | $Q_{RW7Q10}$  |
| $C_C$      | Receiving Water Harmonic Mean   | $Q_{RWHM}$  |
| $C_{HHFO}$ | Intake Water 7Q10   | $Q_{IW7Q10}$  |
| $C_{HHFW}$ | Intake Water Harmonic Mean  | $Q_{IWHM}$  |
| $C_T$      | Zone of Initial Dilution  | ZID   |
| $C_{U}$    | Mixing Zone   | MZ  |
| $TU_a$     | Toxicity Units - Chronic  | $TU_c$  |
| $H_T$      | Receiving Water Hardness  | $H_RW$  |
|            | C <sub>A</sub> C <sub>C</sub> C <sub>HHFO</sub> C <sub>HHFW</sub> C <sub>T</sub> C <sub>U</sub> TU <sub>a</sub> | C <sub>A</sub> Receiving Water 7Q10 C <sub>C</sub> Receiving Water Harmonic Mean C <sub>HHFO</sub> Intake Water 7Q10 C <sub>HHFW</sub> Intake Water Harmonic Mean C <sub>T</sub> Zone of Initial Dilution C <sub>U</sub> Mixing Zone TU <sub>a</sub> Toxicity Units - Chronic |

### **Aquatic Life - Chemical Specific**

# Acute Chronic Mixing Zone / Complete Mix

**NO** ZID given  $C_T = C_A$   $C_T = \{C_C[Q_T + (MZ)(Q_{RW7Q10})] - [C_U(MZ)(Q_{RW7Q10})]\}/Q_T$ 

ZID given  $C_T = (C_A - C_U) \times (ZID)$ 

# **Human Health - Chemical Specific**

### Fish Only: Mixing Zone / Complete Mix

# Fish & Water Only: Mixing Zone / Applicable at point of withdrawal

 $\begin{array}{ll} \text{Carcinogen} & C_T = \{C_{\text{HHFW}}[Q_T + (Q_{\text{IWHM}})] - C_U(Q_{\text{IWHM}})\}/Q_T \\ \text{Non-Carcinogen} & C_T = \{C_{\text{HHFW}}[Q_T + (Q_{\text{IW7Q10}})] - C_U(Q_{\text{IW7Q10}})\}/Q_T \\ \end{array}$ 

# **Aquatic Life - Whole Effluent Toxicity**

# Acute (Units $TU_a$ ) NO ZID given CT = CA Chronic Mixing Zone / Complete Mix (Units $TU_c$ ) $C_T = \{C_C[Q_T + (MZ)(Q_{RW7O10})] - [C_U(MZ)(Q_{RW7O10})] \}/Q_T$

NO ZID given CT = CA  $C_T = \{C_C[Q_T + (MZ)(Q_{RW7Q10})] - [C_U(MZ)(Q_{RW7Q10})]\}/Q_T$  ZID given  $C_T = (C_A - C_U) \times (ZID)$  Conversion of  $TU_c$  to  $TU_a$ :  $TU_c \times ACR = TU_a$ 

Permit No.: KY0080764 AI No.: 1668 Fact Sheet Attachment A Page A - 3

## STEADY STATE TOXICS WASTELOAD ALLOCATION MODEL (SSTWAM2004) – REASONABLE POTENTIAL ANALYSIS – OUTFALL 002

### **Metal Aquatic Criteria**

| <u>Pollutant</u>          | Acute Criteria                               | Chronic Criteria                             |
|---------------------------|--|--|
| Total Recoverable Cadmium | e <sup>(1.0166</sup> (In Hardness) - 3.924)  | e <sup>(0.7409 (In Hardness) - 4.719)</sup>  |
| Chromium III              | e <sup>(0.8190 (In Hardness) + 3.7256)</sup> | e <sup>(0.8190 (In Hardness) + 0.6848)</sup> |
| Total Recoverable Copper  | e <sup>(0.9422 (In Hardness) - 1.700)</sup>  | e <sup>(0.8545 (In Hardness) - 1.702)</sup>  |
| Total Recoverable Lead    | e <sup>(1.273 (In Hardness) - 1.460)</sup>   | e <sup>(1.273 (In Hardness) - 4.705)</sup>   |
| Total Recoverable Nickel  | e <sup>(0.8460 (In Hardness) + 2.255)</sup>  | e <sup>(0.8460(In Hardness) + 0.0584)</sup>  |
| Total Recoverable Silver  | e <sup>(1.72</sup> (In Hardness) - 6.59)     | -  |
| Total Recoverable Zinc    | e <sup>(0.8473 (In Hardness) + 0.884)</sup>  | e <sup>(0.8473 (In Hardness) + 0.884)</sup>  |

## Hardness (as mg/l CaCO<sub>3</sub>)

Zone Initial Dilution (ZID)  $H_{RW} + [H_T + H_{RW}]/ZID$  Mixing Zone  $[(Q_{RW7Q10})(MZ)(H_{RW}) + (Q_T)(H_T)]/[(QRW7Q10)(MZ) + (QT)]$ 

### **Total Ammonia Criteria**

 Chronic - applies state wide - unionzed criteria of 0.05 mg/l
  $[0.05*(1+10^{(pka-pH))}]/1.2$  pka=(0.0902+(2730/(273.1+T)) T = Temperature °C

 Acute - applies to the Ohio River (ORSANCO Criteria)
  $[0.411/(1+10^{(7.204-pH)})]+[58.4/(1+10^{(ph-7.204)})]$ 

### **Bioaccumulative or Persistent**

For new facilities after September 8, 2004 mixing zones shall not be granted for bioaccumulative or persistent pollutants of concern.

Mixing zones for bioaccumulative or persistent pollutants of concerned assigned prior to September 8, 2004 shall expire no later than September 8, 2014, unless the permittee agrees to expiration of the mixing zone prior to that date.

Therefore, the application of the more stringent criteria of Human Health Fish & Water Consumption, Human Health Fish Only Consumption, and Aquatic Life Chronic shall apply as end-of-pipe effluent limitations.

### **Antidegradation**

If a new facility or an existing facility that will have a pollutant load increase, the effluent limits are halved unless the receiving stream is impaired or the permittee has demonstrated a negative socioeconomic or cost benefit analysis.

Permit No.: KY0080764 AI No.: 1668 Fact Sheet Attachment A Page A - 4

### STEADY STATE TOXICS WASTELOAD ALLOCATION MODEL (SSTWAM2004) – REASONABLE POTENTIAL ANALYSIS – OUTFALL 002

### **Reasonable Potential Analysis**

In establishing water quality based effluent conditions the Division of Water must determine if the pollutant concentrations in the discharge will cause, have the reasonable potential to cause, or contribute to an excursion of any water standard. The process by which the Division of Water makes this determination is known as a Reasonable Potential Analysis.

A Reasonable Potential Analysis is performed by first calculating the expected effluent limitations for those pollutants with water quality criteria. The calculated limits are then compared to the concentrations reported on the KPDES permit application and/or a summarization of the values reported on the Discharge Monitoring Report (DMRs) submitted during the term of the permit. This comparison is made by dividing the reported value by the calculated effluent limitation and converting to a percentage. The following criteria are used in determining how the pollutant will be addressed in the permit.

## **New Permits or New Pollutants on Permit Renewals**

If the reported concentration is less than 70% of the calculated effluent limit then no monitoring or limitations will be required.

If the reported concentration is equal to or greater than 70% but less than 90% of the calculated effluent limit then monitoring will be required.

If the reported concentration is equal to or greater than 90% and the number of analysis reported on the KPDES permit application is less than 12 then monitoring will be required.

If the reported concentration is equal to or greater than 90% and the number of analysis reported on the KPDES permit application is equal or greater than 12 then an effluent limitation will be required.

### **Permit Renewals - Existing Pollutants**

If the reported concentration is less than 70% of the calculated effluent limit then and the source of the reported concentration was the DMRs for that facility and there were more than 12 DMRs utilized to determine the reported concentrations then the pollutant will be removed from the permit.

If the reported concentration is equal to or greater than 70% but less than 90% of the calculated effluent limit then monitoring will be required.

If the reported concentration is equal to or greater than 90% then an effluent limitation will be required.

In all cases, the Division of Water still may exercise its Best Professional Judgment in the implementation of the results.

AI No.: 1668

Fact Sheet Attachment A

Page A - 5

| Parameter                           | <u>CAS</u>         | Reported Dis          | scharge (mg/l) | Calculated Effluent L | _imitations (mg/l) | Reasonable         | e Potential        | <u>Data</u> | No. of          | Effluent Re    | <u>equirement</u> | <u>Justific</u> | cation          |
|-------------------------------------|--------------------|-----------------------|----------------|-----------------------|--------------------|--------------------|--------------------|-------------|-----------------|----------------|-------------------|-----------------|-----------------|
| <u>i didilicici</u>                 | Number             | <u>Average</u>        | <u>Maximum</u> | <u>Average</u>        | <u>Maximum</u>     | <u>Average</u>     | <u>Maximum</u>     | Source      | Samples         | <u>Average</u> | <u>Maximum</u>    | <u>Average</u>  | <u>Maximum</u>  |
| Chloride                            | 16887006           | 0.000000              | 0.000000       | 600.000000            | 1,200.000000       | 0.00%              | 0.00%              | No Data     | 0               | None           | None              | Chronic         | Acute           |
| Total Residual Chlorine             |                    | 0.000000              | 0.000000       | 0.011000              | 0.019000           | 0.00%              | 0.00%              | No Data     | 0               | None           | None              | Chronic         | Acute           |
| Color                               |                    | 0.000000              | 0.000000       | 122.815000            | NA                 | 0.00%              | 0.00%              | No Data     | 0               | None           | None              | HH DWS          | NA              |
| Fluoride                            |                    | 0.000000              | 0.000000       | 3,275.066667          | NA                 | 0.00%              | 0.00%              | No Data     | 0               | None           | None              | HH DWS          | NA              |
| Nitrate-Nitrite (as N)              | 14797558           | 0.000000              | 0.000000       | 16,375.333333         | NA                 | 0.00%              | 0.00%              | No Data     | 0               | None           | None              | HH DWS          | NA              |
| Total Alpha                         |                    | 0.000000              | 0.000000       | NA                    | 15.000000          | 0.00%              | 0.00%              | No Data     | 0               | None           | None              | NA              | Acute           |
| Total Beta                          |                    | 0.000000              | 0.000000       | NA                    | 50.000000          | 0.00%              | 0.00%              | No Data     | 0               | None           | None              | NA              | Acute           |
| Total Radium                        |                    | 0.000000              | 0.000000       | NA                    | 5.000000           | 0.00%              | 0.00%              | No Data     | 0               | None           | None              | NA              | Acute           |
| Sulfate (as SO4)                    |                    | 0.000000              | 0.000000       | 409,383.333333        | NA                 | 0.00%              | 0.00%              | No Data     | 0               | None           | None              | HH DWS          | NA              |
| Surfactants                         |                    | 0.000000              | 0.000000       | 818.766667            | NA                 | 0.00%              | 0.00%              | No Data     | 0               | None           | None              | HH DWS          | NA              |
| Total Recoverable Barium            | 7440393            | 0.000000              | 0.000000       | 1,637.533333          | NA                 | 0.00%              | 0.00%              | No Data     | 0               | None           | None              | HH DWS          | NA              |
| Total Recoverable Iron              | 7439896            | 0.000000              | 0.000000       | 1.000000              | 4.000000           | 0.00%              | 0.00%              | No Data     | 0               | None           | None              | Chronic         | Acute           |
| Total Recoverable Antimony          | 7440360            | 0.000000              | 0.000000       | 0.640000              | NA                 | 0.00%              | 0.00%              | No Data     | 0               | None           | None              | HH Fish         | NA              |
| Total Recoverable Arsenic           | 7440382            | 0.000000              | 0.000000       | 0.150000              | 0.340000           | 0.00%              | 0.00%              | No Data     | 0               | None           | None              | Chronic         | Acute           |
| Total Recoverable Beryllium         | 7440417            | 0.000000              | 0.000000       | 6.550133              | NA                 | 0.00%              | 0.00%              | No Data     | 0               | None           | None              | HH DWS          | NA              |
| Total Recoverable Cadmium           | 7440439            | 0.000000              | 0.000000       | 0.000387              | 0.003484           | 0.00%              | 0.00%              | No Data     | 0               | None           | None              | Chronic         | Acute           |
| Total Recoverable Chromium          | 7440439            | 0.000000              | 0.000000       | 163.753333            | NA                 | 0.00%              | 0.00%              | No Data     | 0               | None           | None              | HH DWS          | NA              |
| Total Recoverable Copper            | 7440508            | 0.000000              | 0.000000       | 0.014088              | 0.022055           | 0.00%              | 0.00%              | No Data     | 0               | None           | None              | Chronic         | Acute           |
| Total Recoverable Lead              | 7439921            | 0.000000              | 0.000000       | 0.005880              | 0.150884           | 0.00%              | 0.00%              | No Data     | 0               | None           | None              | Chronic         | Acute           |
| Total Recoverable Mercury           | 7439976            | 0.000000              | 0.000000       | 0.000051              | 0.001700           | 0.00%              | 0.00%              | No Data     | 0               | None           | None              | HH Fish         | Acute           |
| Total Recoverable Nickel            | 7440020            | 0.000000              | 0.000000       | 0.078454              | 0.705641           | 0.00%              | 0.00%              | No Data     | 0               | None           | None              | Chronic         | Acute           |
| Total Recoverable Selenium          | 7782492            | 0.000000              | 0.000000       | 0.005000              | 0.020000           | 0.00%              | 0.00%              | No Data     | 0               | None           | None              | Chronic         | Acute           |
| Total Recoverable Silver            | 7440224            | 0.000000              | 0.000000       | NA                    | 0.008677           | 0.00%              | 0.00%              | No Data     | 0               | None           | None              | NA              | Acute           |
| Total Recoverable Thallium          | 7440280            | 0.000000              | 0.000000       | 0.006300              | NA                 | 0.00%              | 0.00%              | No Data     | 0               | None           | None              | HH Fish         | NA              |
| Total Recoverable Zinc              | 7440666            | 0.000000              | 0.000000       | 0.180318              | 0.180318           | 0.00%              | 0.00%              | No Data     | 0               | None           | None              | Chronic         | Acute           |
| Free Cyanide                        | 57125              | 0.000000              | 0.000000       | 0.005200              | 0.022000           | 0.00%              | 0.00%              | No Data     | 0               | None           | None              | Chronic         | Acute           |
| 2,3,7,8 Tetrachlorodibenzo P Dioxin | 1746016            | 0.000000              | 0.000000       | 0.000000              | NA                 | 0.00%              | 0.00%              | No Data     | 0               | None           | None              | HH Fish         | NA              |
| Acrolein                            | 107028             | 0.000000              | 0.000000       | 0.290000              | NA                 | 0.00%              | 0.00%              | No Data     | 0               | None           | None              | HH Fish         | NA              |
| Acrylonitrile                       | 107131             | 0.000000              | 0.000000       | 0.000250              | NA                 | 0.00%              | 0.00%              | No Data     | 0               | None           | None              | HH Fish         | NA              |
| <mark>Benzene</mark>                | <mark>71432</mark> | <mark>0.003900</mark> | 0.003900       | <mark>0.051000</mark> | <mark>NA</mark>    | <mark>7.65%</mark> | <mark>0.00%</mark> | <b>DMR</b>  | <mark>25</mark> | <b>Remove</b>  | Remove            | HH Fish         | <mark>NA</mark> |
| Bromoform                           | 75252              | 0.000000              | 0.000000       | 0.140000              | NA                 | 0.00%              | 0.00%              | No Data     | 0               | None           | None              | HH Fish         | NA              |
| Carbon Tetrachloride                | 56235              | 0.000000              | 0.000000       | 0.001600              | NA                 | 0.00%              | 0.00%              | No Data     | 0               | None           | None              | HH Fish         | NA              |
| Chlorobenzene                       | 108907             | 0.000000              | 0.000000       | 21.000000             | NA                 | 0.00%              | 0.00%              | No Data     | 0               | None           | None              | HH Fish         | NA              |
| Chlorodibromomethane                | 124481             | 0.000000              | 0.000000       | 0.013000              | NA                 | 0.00%              | 0.00%              | No Data     | 0               | None           | None              | HH Fish         | NA              |
| Chloroform                          | 67663              | 0.000000              | 0.000000       | 0.470000              | NA                 | 0.00%              | 0.00%              | No Data     | 0               | None           | None              | HH Fish         | NA              |
| Dichlorobromomethane                | 75274              | 0.000000              | 0.000000       | 0.017000              | NA                 | 0.00%              | 0.00%              | No Data     | 0               | None           | None              | HH Fish         | NA              |
| 1,2-Dichloroethane                  | 107062             | 0.000000              | 0.000000       | 0.037000              | NA                 | 0.00%              | 0.00%              | No Data     | 0               | None           | None              | HH Fish         | NA              |
| 1,1-Dichloroethylene                | 75354              | 0.000000              | 0.000000       | 0.003200              | NA                 | 0.00%              | 0.00%              | No Data     | 0               | None           | None              | HH Fish         | NA              |
| 1,2-Dichloropropane                 | 78875              | 0.000000              | 0.000000       | 0.015000              | NA                 | 0.00%              | 0.00%              | No Data     | 0               | None           | None              | HH Fish         | NA              |
| 1,3-Dichloropropene                 | 542756             | 0.000000              | 0.000000       | 1.700000              | NA                 | 0.00%              | 0.00%              | No Data     | 0               | None           | None              | HH Fish         | NA              |
| Ethylbenzene                        | 100414             | 0.000000              | 0.000000       | 29.000000             | NA                 | 0.00%              | 0.00%              | No Data     | 0               | None           | None              | HH Fish         | NA              |
| Methyl Bromide                      | 74839              | 0.000000              | 0.000000       | 1.500000              | NA                 | 0.00%              | 0.00%              | No Data     | 0               | None           | None              | HH Fish         | NA              |
| Methylene Chloride                  | 75092              | 0.000000              | 0.000000       | 0.590000              | NA                 | 0.00%              | 0.00%              | No Data     | 0               | None           | None              | HH Fish         | NA              |

AI No.: 1668

Fact Sheet Attachment A

Page A - 6

| Parameter                   | CAS                | Reported Dis          | scharge (mg/l) | Calculated Effluent Lin | mitations (mg/l) | Reasonable     | e Potential    | <u>Data</u> | No. of          | Effluent Re    | equirement     | <u>Justific</u> | cation          |
|-----------------------------|--------------------|-----------------------|----------------|-------------------------|------------------|----------------|----------------|-------------|-----------------|----------------|----------------|-----------------|-----------------|
| <u>i didilicici</u>         | <u>Number</u>      | Average               | Maximum        | <u>Average</u>          | <u>Maximum</u>   | <u>Average</u> | <u>Maximum</u> | Source      | <u>Samples</u>  | <u>Average</u> | <u>Maximum</u> | <u>Average</u>  | <u>Maximum</u>  |
| 1,1,2,2-Tetrachloroethane   | 79345              | 0.000000              | 0.000000       | 0.004000                | NA               | 0.00%          | 0.00%          | No Data     | 0               | None           | None           | HH Fish         | NA              |
| Tetrachloroethylene         | 127184             | 0.000000              | 0.000000       | 0.003300                | NA               | 0.00%          | 0.00%          | No Data     | 0               | None           | None           | HH Fish         | NA              |
| Toluene                     | 108883             | 0.000000              | 0.000000       | 200.000000              | NA               | 0.00%          | 0.00%          | No Data     | 0               | None           | None           | HH Fish         | NA              |
| 1,2-Trans-Dichloroethylene  | 156605             | 0.000000              | 0.000000       | 140.000000              | NA               | 0.00%          | 0.00%          | No Data     | 0               | None           | None           | HH Fish         | NA              |
| 1,1,1-Trichloroethane       | 71556              | 0.000000              | 0.000000       | 327.506667              | NA               | 0.00%          | 0.00%          | No Data     | 0               | None           | None           | HH DWS          | NA              |
| 1,1,2-Trichloroethane       | 79005              | 0.000000              | 0.000000       | 0.016000                | NA               | 0.00%          | 0.00%          | No Data     | 0               | None           | None           | HH Fish         | NA              |
| Trichloroethylene           | 79016              | 0.000000              | 0.000000       | 0.030000                | NA               | 0.00%          | 0.00%          | No Data     | 0               | None           | None           | HH Fish         | NA              |
| Vinyl Chloride              | 75014              | 0.000000              | 0.000000       | 0.530000                | NA               | 0.00%          | 0.00%          | No Data     | 0               | None           | None           | HH Fish         | NA              |
| 2-Chlorophenol              | 95578              | 0.000000              | 0.000000       | 0.150000                | NA               | 0.00%          | 0.00%          | No Data     | 0               | None           | None           | HH Fish         | NA              |
| 2,4-Dichlorophenol          | 120832             | 0.000000              | 0.000000       | 0.290000                | NA               | 0.00%          | 0.00%          | No Data     | 0               | None           | None           | HH Fish         | NA              |
| 2,4-Dimethylphenol          | 105679             | 0.000000              | 0.000000       | 0.850000                | NA               | 0.00%          | 0.00%          | No Data     | 0               | None           | None           | HH Fish         | NA              |
| 2,4-Dinitrophenol           | 51285              | 0.000000              | 0.000000       | 5.300000                | NA               | 0.00%          | 0.00%          | No Data     | 0               | None           | None           | HH Fish         | NA              |
| Pentachlorophenol           | 87865              | 0.000000              | 0.000000       | 0.003000                | NA               | 0.00%          | 0.00%          | No Data     | 0               | None           | None           | HH Fish         | NA              |
| Phenol                      | 108952             | 0.000000              | 0.000000       | 1,700.000000            | NA               | 0.00%          | 0.00%          | No Data     | 0               | None           | None           | HH Fish         | NA              |
| 2,4,6-Trichlorophenol       | 88062              | 0.000000              | 0.000000       | 0.002400                | NA               | 0.00%          | 0.00%          | No Data     | 0               | None           | None           | HH Fish         | NA              |
| Acenaphthene                | 83329              | 0.000000              | 0.000000       | 0.990000                | NA               | 0.00%          | 0.00%          | No Data     | 0               | None           | None           | HH Fish         | NA              |
| Anthracene                  | 120127             | 0.000000              | 0.000000       | 40.000000               | NA               | 0.00%          | 0.00%          | No Data     | 0               | None           | None           | HH Fish         | NA              |
| Benzidine                   | 92875              | 0.000000              | 0.000000       | 0.000000                | NA               | 0.00%          | 0.00%          | No Data     | 0               | None           | None           | HH Fish         | NA              |
| Benzo(a)anthracene          | 56553              | 0.000000              | 0.000000       | 0.000018                | NA               | 0.00%          | 0.00%          | No Data     | 0               | None           | None           | HH Fish         | NA              |
| Benzo(a)pyrene              | 50328              | 0.000000              | 0.000000       | 0.000018                | NA               | 0.00%          | 0.00%          | No Data     | 0               | None           | None           | HH Fish         | NA              |
| Benzo(k)fluoranthene        | 205992             | 0.000000              | 0.000000       | 0.000018                | NA               | 0.00%          | 0.00%          | No Data     | 0               | None           | None           | HH Fish         | NA              |
| Bis(2-chloroisopropyl)ether | 108601             | 0.000000              | 0.000000       | 65.000000               | NA               | 0.00%          | 0.00%          | No Data     | 0               | None           | None           | HH Fish         | NA              |
| Bis(2-ethylhexyl)phthalate  | 117817             | 0.000000              | 0.000000       | 0.002200                | NA               | 0.00%          | 0.00%          | No Data     | 0               | None           | None           | HH Fish         | NA              |
| Butylbenzyl phthalate       | 85687              | 0.000000              | 0.000000       | 1.900000                | NA               | 0.00%          | 0.00%          | No Data     | 0               | None           | None           | HH Fish         | NA              |
| 2-Chloronaphthalene         | 91587              | 0.000000              | 0.000000       | 1.600000                | NA               | 0.00%          | 0.00%          | No Data     | 0               | None           | None           | HH Fish         | NA              |
| Chrysene                    | 218019             | 0.000000              | 0.000000       | 0.000018                | NA               | 0.00%          | 0.00%          | No Data     | 0               | None           | None           | HH Fish         | NA              |
| Dibenzo(a,h)anthracene      | 53703              | 0.000000              | 0.000000       | 0.000018                | NA               | 0.00%          | 0.00%          | No Data     | 0               | None           | None           | HH Fish         | NA              |
| 1,2-Dichlorobenzene         | 95501              | 0.000000              | 0.000000       | 17.000000               | NA               | 0.00%          | 0.00%          | No Data     | 0               | None           | None           | HH Fish         | NA              |
| 1,3-Dichlorobenzene         | 541731             | 0.000000              | 0.000000       | 0.960000                | NA               | 0.00%          | 0.00%          | No Data     | 0               | None           | None           | HH Fish         | NA              |
| 1,4-Dichlorobenzene         | 106467             | 0.000000              | 0.000000       | 2.600000                | NA               | 0.00%          | 0.00%          | No Data     | 0               | None           | None           | HH Fish         | NA              |
| 3,3-Dichlorobenzidine       | 91941              | 0.000000              | 0.000000       | 0.000028                | NA               | 0.00%          | 0.00%          | No Data     | 0               | None           | None           | HH Fish         | NA              |
| Diethyl phthalate           | 84662              | 0.000000              | 0.000000       | 44.000000               | NA               | 0.00%          | 0.00%          | No Data     | 0               | None           | None           | HH Fish         | NA              |
| Dimethyl phthalate          | 131113             | 0.000000              | 0.000000       | 1,100.000000            | NA               | 0.00%          | 0.00%          | No Data     | 0               | None           | None           | HH Fish         | NA              |
| Di-n-butyl phthalate        | 84742              | 0.000000              | 0.000000       | 4.500000                | NA               | 0.00%          | 0.00%          | No Data     | 0               | None           | None           | HH Fish         | NA              |
| 2,4-Dinitrotoluene          | 121142             | 0.000000              | 0.000000       | 0.003400                | NA               | 0.00%          | 0.00%          | No Data     | 0               | None           | None           | HH Fish         | NA              |
| 1,2-Diphenylhydrazine       | 122667             | 0.000000              | 0.000000       | 0.000200                | NA               | 0.00%          | 0.00%          | No Data     | 0               | None           | None           | HH Fish         | NA              |
| Fluoranthene                | 206440             | 0.000000              | 0.000000       | 0.140000                | NA               | 0.00%          | 0.00%          | No Data     | 0               | None           | None           | HH Fish         | NA              |
| Fluorene<br>                | <mark>86737</mark> | <mark>0.008500</mark> | 0.008500       | 5.300000                | NA               | 0.16%          | 0.00%          | DMR         | <mark>25</mark> | Remove         | Remove         | HH Fish         | <mark>NA</mark> |
| Hexachlorobenzene           | 118741             | 0.000000              | 0.000000       | 0.000000                | NA               | 0.00%          | 0.00%          | No Data     | 0               | None           | None           | HH Fish         | NA              |
| Hexachlorobutadiene         | 87683              | 0.000000              | 0.000000       | 0.018000                | NA               | 0.00%          | 0.00%          | No Data     | 0               | None           | None           | HH Fish         | NA              |
| Hexachlorocyclopentadiene   | 77474              | 0.000000              | 0.000000       | 17.000000               | NA               | 0.00%          | 0.00%          | No Data     | 0               | None           | None           | HH Fish         | NA              |
| Hexachloroethane            | 67721              | 0.000000              | 0.000000       | 0.003300                | NA               | 0.00%          | 0.00%          | No Data     | 0               | None           | None           | HH Fish         | NA              |
| Ideno(1,2,3-cd)pyrene       | 193395             | 0.000000              | 0.000000       | 0.000018                | NA               | 0.00%          | 0.00%          | No Data     | 0               | None           | None           | HH Fish         | NA              |

AI No.: 1668

Fact Sheet Attachment A

Page A - 7

| Parameter                        | CAS           | Reported Dis   | scharge (mg/l) | Calculated Effluent Lin | nitations (mg/l) | Reasonable     | e Potential    | Data          | No. of         | Effluent R     | <u>lequirement</u> | Justific       | cation_        |
|----------------------------------|---------------|----------------|----------------|-------------------------|------------------|----------------|----------------|---------------|----------------|----------------|--------------------|----------------|----------------|
| <u> </u>                         | <u>Number</u> | <u>Average</u> | Maximum        | <u>Average</u>          | <u>Maximum</u>   | <u>Average</u> | <u>Maximum</u> | <u>Source</u> | <u>Samples</u> | <u>Average</u> | <u>Maximum</u>     | <u>Average</u> | <u>Maximum</u> |
| Isophorone                       | 78591         | 0.000000       | 0.000000       | 0.960000                | NA               | 0.00%          | 0.00%          | No Data       | 0              | None           | None               | HH Fish        | NA             |
| Nitrobenzene                     | 98953         | 0.000000       | 0.000000       | 0.690000                | NA               | 0.00%          | 0.00%          | No Data       | 0              | None           | None               | HH Fish        | NA             |
| N-Nitrosodimethylamine           | 62759         | 0.000000       | 0.000000       | 0.003000                | NA               | 0.00%          | 0.00%          | No Data       | 0              | None           | None               | HH Fish        | NA             |
| N-Nitrosodi-n-Propylamine        | 621647        | 0.000000       | 0.000000       | 0.000510                | NA               | 0.00%          | 0.00%          | No Data       | 0              | None           | None               | HH Fish        | NA             |
| N-Nitrosodiphenylamine           | 86306         | 0.000000       | 0.000000       | 0.006000                | NA               | 0.00%          | 0.00%          | No Data       | 0              | None           | None               | HH Fish        | NA             |
| Pyrene                           | 129000        | 0.000000       | 0.000000       | 4.000000                | NA               | 0.00%          | 0.00%          | No Data       | 0              | None           | None               | HH Fish        | NA             |
| 1,2,4-Trichlorobenzene           | 120821        | 0.000000       | 0.000000       | 0.940000                | NA               | 0.00%          | 0.00%          | No Data       | 0              | None           | None               | HH Fish        | NA             |
| Aldrin                           | 309002        | 0.000000       | 0.000000       | 0.000000                | 0.003000         | 0.00%          | 0.00%          | No Data       | 0              | None           | None               | HH Fish        | Acute          |
| alpha-BHC                        | 319846        | 0.000000       | 0.000000       | 0.000005                | NA               | 0.00%          | 0.00%          | No Data       | 0              | None           | None               | HH Fish        | NA             |
| Beta-BHC                         | 319857        | 0.000000       | 0.000000       | 0.000017                | NA               | 0.00%          | 0.00%          | No Data       | 0              | None           | None               | HH Fish        | NA             |
| gamma-BHC (Lindane)              | 58899         | 0.000000       | 0.000000       | 0.000063                | 0.000950         | 0.00%          | 0.00%          | No Data       | 0              | None           | None               | HH Fish        | Acute          |
| Chlordane                        | 57749         | 0.000000       | 0.000000       | 0.000001                | 0.002400         | 0.00%          | 0.00%          | No Data       | 0              | None           | None               | HH Fish        | Acute          |
| 4,4'-DDT                         | 50293         | 0.000000       | 0.000000       | 0.000000                | 0.001100         | 0.00%          | 0.00%          | No Data       | 0              | None           | None               | HH Fish        | Acute          |
| 4,4'-DDE                         | 72559         | 0.000000       | 0.000000       | 0.000000                | NA               | 0.00%          | 0.00%          | No Data       | 0              | None           | None               | HH Fish        | NA             |
| 4,4'-DDD                         | 72548         | 0.000000       | 0.000000       | 0.000000                | NA               | 0.00%          | 0.00%          | No Data       | 0              | None           | None               | HH Fish        | NA             |
| Dieldrin                         | 60571         | 0.000000       | 0.000000       | 0.000000                | 0.000240         | 0.00%          | 0.00%          | No Data       | 0              | None           | None               | HH Fish        | Acute          |
| Alpha-Endosulfan                 | 959988        | 0.000000       | 0.000000       | 0.000056                | 0.000220         | 0.00%          | 0.00%          | No Data       | 0              | None           | None               | Chronic        | Acute          |
| Beta-Endosulfan                  | 33213659      | 0.000000       | 0.000000       | 0.000056                | 0.000220         | 0.00%          | 0.00%          | No Data       | 0              | None           | None               | Chronic        | Acute          |
| Endosulfan sulfate               | 1031078       | 0.000000       | 0.000000       | 0.089000                | NA               | 0.00%          | 0.00%          | No Data       | 0              | None           | None               | HH Fish        | NA             |
| Endrin                           | 72208         | 0.000000       | 0.000000       | 0.000036                | 0.000086         | 0.00%          | 0.00%          | No Data       | 0              | None           | None               | Chronic        | Acute          |
| Endrin aldehyde                  | 7421934       | 0.000000       | 0.000000       | 0.000300                | NA               | 0.00%          | 0.00%          | No Data       | 0              | None           | None               | HH Fish        | NA             |
| Heptachlor                       | 76448         | 0.000000       | 0.000000       | 0.000000                | 0.000520         | 0.00%          | 0.00%          | No Data       | 0              | None           | None               | HH Fish        | Acute          |
| Heptachlor epoxide               | 1024573       | 0.000000       | 0.000000       | 0.000000                | 0.000520         | 0.00%          | 0.00%          | No Data       | 0              | None           | None               | HH Fish        | Acute          |
| Polychlorinated Biphenyls (PCBs) |               | 0.000000       | 0.000000       | 0.000000                | NA               | 0.00%          | 0.00%          | No Data       | 0              | None           | None               | HH Fish        | NA             |
| Toxaphene                        | 8001352       | 0.000000       | 0.000000       | 0.000000                | 0.000730         | 0.00%          | 0.00%          | No Data       | 0              | None           | None               | Chronic        | Acute          |
| 1,2,4,5-Tetrachlorobenzene       | 95943         | 0.000000       | 0.000000       | 0.001100                | NA               | 0.00%          | 0.00%          | No Data       | 0              | None           | None               | HH Fish        | NA             |
| 2-methyl-4,6-dinitrophenol       | 534521        | 0.000000       | 0.000000       | 0.280000                | NA               | 0.00%          | 0.00%          | No Data       | 0              | None           | None               | HH Fish        | NA             |
| 2,4-D                            | 94757         | 0.000000       | 0.000000       | 695.403333              | NA               | 0.00%          | 0.00%          | No Data       | 0              | None           | None               | HH DWS         | NA             |
| 2,4,5-TP (Silvex)                | 93721         | 0.000000       | 0.000000       | 16.375333               | NA               | 0.00%          | 0.00%          | No Data       | 0              | None           | None               | HH DWS         | NA             |
| 2,4,5-trichlorophenol            | 95954         | 0.000000       | 0.000000       | 3.600000                | NA               | 0.00%          | 0.00%          | No Data       | 0              | None           | None               | HH Fish        | NA             |
| Asbestos                         | 1332214       | 0.000000       | 0.000000       | 69,540,333.333333       | NA               | 0.00%          | 0.00%          | No Data       | 0              | None           | None               | HH DWS         | NA             |
| Benzo(b)fluoranthene             | 205992        | 0.000000       | 0.000000       | 0.000018                | NA               | 0.00%          | 0.00%          | No Data       | 0              | None           | None               | HH Fish        | NA             |
| Bis(2-chloroethyl)ether          | 111444        | 0.000000       | 0.000000       | 0.000530                | NA               | 0.00%          | 0.00%          | No Data       | 0              | None           | None               | HH Fish        | NA             |
| Bis(chloromethyl)ether           | 542881        | 0.000000       | 0.000000       | 0.000000                | NA               | 0.00%          | 0.00%          | No Data       | 0              | None           | None               | HH Fish        | NA             |
| Chloropyrifos                    | 2921882       | 0.000000       | 0.000000       | 0.000041                | 0.000083         | 0.00%          | 0.00%          | No Data       | 0              | None           | None               | Chronic        | Acute          |
| Chromium (III)                   | 16065831      | 0.000000       | 0.000000       | 0.127937                | 2.676704         | 0.00%          | 0.00%          | No Data       | 0              | None           | None               | Chronic        | Acute          |
| Chromium (VI)                    | 18540299      | 0.000000       | 0.000000       | 0.011000                | 0.016000         | 0.00%          | 0.00%          | No Data       | 0              | None           | None               | Chronic        | Acute          |
| Demeton                          | 8065483       | 0.000000       | 0.000000       | 0.000100                | NA               | 0.00%          | 0.00%          | No Data       | 0              | None           | None               | Chronic        | NA             |
| Dinitrophenols                   | 25550587      | 0.000000       | 0.000000       | 5.300000                | NA               | 0.00%          | 0.00%          | No Data       | 0              | None           | None               | HH Fish        | NA             |
| Guthion                          | 86500         | 0.000000       | 0.000000       | 0.000010                | NA               | 0.00%          | 0.00%          | No Data       | 0              | None           | None               | Chronic        | NA             |
| Hexachlorocyclo-hexane-Technical | 319868        | 0.000000       | 0.000000       | 0.000041                | NA               | 0.00%          | 0.00%          | No Data       | 0              | None           | None               | HH Fish        | NA             |
| Hydrogen Sulfide, Undissociated  | 7783064       | 0.000000       | 0.000000       | 0.002000                | NA               | 0.00%          | 0.00%          | No Data       | 0              | None           | None               | Chronic        | NA             |
| Malathion                        | 121755        | 0.000000       | 0.000000       | 0.000100                | NA               | 0.00%          | 0.00%          | No Data       | 0              | None           | None               | Chronic        | NA             |

AI No.: 1668

Fact Sheet Attachment A

Page A - 8

# STEADY STATE TOXICS WASTELOAD ALLOCATION MODEL (SSTWAM2004) - REASONABLE POTENTIAL ANALYSIS - OUTFALL 002

| Parameter              | <u>CAS</u> | Reported Dis | charge (mg/l) | Calculated Effluent L | _imitations (mg/l) Reasonable Potential |                | Data No. of |               | Effluent Requirement |                | <u>Justification</u> |                |                |
|------------------------|------------|--------------|---------------|-----------------------|---|----------------|-------------|---------------|----------------------|----------------|----------------------|----------------|----------------|
| <u>r arameter</u>      | Number     | Average      | Maximum       | <u>Average</u>        | <u>Maximum</u>                          | <u>Average</u> | Maximum     | <u>Source</u> | Samples              | <u>Average</u> | <u>Maximum</u>       | <u>Average</u> | <u>Maximum</u> |
| Methoxychlor           | 72435      | 0.000000     | 0.000000      | 0.000030              | NA                                      | 0.00%          | 0.00%       | No Data       | 0                    | None           | None                 | Chronic        | NA             |
| Mirex                  | 2385855    | 0.000000     | 0.000000      | 0.000001              | NA                                      | 0.00%          | 0.00%       | No Data       | 0                    | None           | None                 | Chronic        | NA             |
| Nitrosamines, Other    |            | 0.000000     | 0.000000      | 0.001240              | NA                                      | 0.00%          | 0.00%       | No Data       | 0                    | None           | None                 | HH Fish        | NA             |
| N-Nitrosodibutylamine  | 924163     | 0.000000     | 0.000000      | 0.000220              | NA                                      | 0.00%          | 0.00%       | No Data       | 0                    | None           | None                 | HH Fish        | NA             |
| N-Nitrosodiethylamine  | 55185      | 0.000000     | 0.000000      | 0.001240              | NA                                      | 0.00%          | 0.00%       | No Data       | 0                    | None           | None                 | HH Fish        | NA             |
| N-Nitrosopyrrolidine   | 930552     | 0.000000     | 0.000000      | 0.034000              | NA                                      | 0.00%          | 0.00%       | No Data       | 0                    | None           | None                 | HH Fish        | NA             |
| Parathion              | 56382      | 0.000000     | 0.000000      | 0.000013              | 0.000065                                | 0.00%          | 0.00%       | No Data       | 0                    | None           | None                 | Chronic        | Acute          |
| Pentachlorobenzene     | 608935     | 0.000000     | 0.000000      | 0.001500              | NA                                      | 0.00%          | 0.00%       | No Data       | 0                    | None           | None                 | HH Fish        | NA             |
| Phthalate esters       |            | 0.000000     | 0.000000      | 0.003000              | NA                                      | 0.00%          | 0.00%       | No Data       | 0                    | None           | None                 | Chronic        | NA             |
| Total Dissolved Solids |            | 0.000000     | 0.000000      | 1,228,150.000000      | NA                                      | 0.00%          | 0.00%       | No Data       | 0                    | None           | None                 | HH DWS         | NA             |
| Tritium                |            | 0.000000     | 0.000000      | NA                    | 20,000.000000                           | 0.00%          | 0.00%       | No Data       | 0                    | None           | None                 | NA             | Acute          |
| Total Strontium-90     |            | 0.000000     | 0.000000      | NA                    | 8.000000                                | 0.00%          | 0.00%       | No Data       | 0                    | None           | None                 | NA             | Acute          |
| Uranium                |            | 0.000000     | 0.000000      | NA                    | 0.030000                                | 0.00%          | 0.00%       | No Data       | 0                    | None           | None                 | NA             | Acute          |
| Total Ammonia          |            | 0.000000     | 0.000000      | 5.302315              | 26.213895                               | 0.00%          | 0.00%       | No Data       | 0                    | None           | None                 | Chronic        | Acute          |

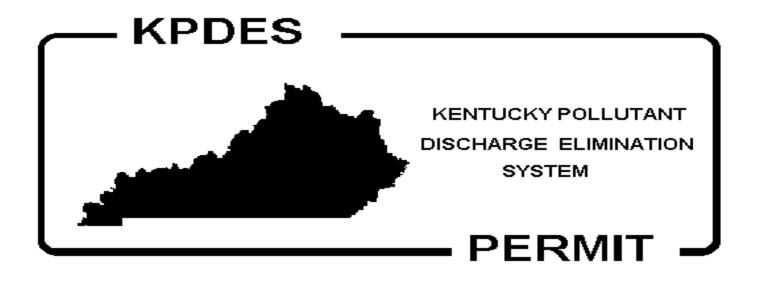
Hardness

Metal limitations are developed using the mixed hardness of the effluent and receiving waters

<u>Chronic</u> <u>Acute</u> 162.00 162.00

### **Toxicity**

| Type of Test | <u>Maximum</u> | <u>Units</u> | <u>Justification</u> | Percent Effluent |
|--------------|----------------|--------------|----------------------|------------------|
| Chronic      | 1.00           | TUc          | Chronic              | 100.00%          |



**PERMIT NO.:** KY0080764 **AI NO.:** 1668

# AUTHORIZATION TO DISCHARGE UNDER THE KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

Pursuant to Authority in KRS 224,

Pilot Travel Centers, LLC 5508 Lonas Road Knoxville, TN 37909

is authorized to discharge from a facility located at

Pilot Travel Centers No. 048 58 Glendale-Hodgenville Road Glendale, Hardin County, Kentucky

to receiving waters of an

unnamed tributary to Jackson Branch of Nolin River at latitude 37° 35' 50" and longitude 85° 51' 50"

in accordance with effluent limitations, monitoring requirements and other conditions set forth in Parts I, II, III, IV, and V hereof. The permit consists of this cover sheet, and Part I  $\underline{3}$  pages, Part II  $\underline{1}$  pages, and Part III 1 page, and Part IV 3 pages.

This permit shall become effective on.

| This | permit | and | the | author   | ization | to | discharg | ge s | shall | expire  | at   | midni | ght |
|------|--------|-----|-----|----------|---------|----|----------|------|-------|---------|------|-------|-----|
| •    |        |     | - 1 | <b>A</b> |         |    |          |      |       |         |      |       |     |
|      |        |     | 1   | #        |         |    |          |      |       |         |      |       |     |
|      | 1      |     |     |          |         |    |          |      |       |         |      |       |     |
| Date | Signed |     |     |          |         |    | Sandra   | L.   | Gruze | esky, I | irec | tor   |     |

Division of Water

PART I-Page I-1

Permit No.: KY0080764

AI No.: 1668

### PART I A - EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning on the effective date of this permit and lasting through the term of this permit, the permittee is authorized to discharge from Outfall serial number: 001 - Outfall 001 - (Internal Outfall) - Sanitary Wastewater

Such discharges shall be limited and monitored by the permittee as specified below:

| EFFLUENT CHARACTERISTICS      |         | DISCHARGE | LIMITATIONS |           | MONITORING RE | QUIREMENTS    |
|-------------------------------|---------|-----------|-------------|-----------|---------------|---------------|
|                               | (1bs    | /day)     | Other Units | (Specify) |               |               |
|                               | Monthly | Daily     | Monthly     | Daily     | Measurement   | Sample        |
|                               | Avg.    | Max.      | Avg.        | Max.      | Frequency     | Type          |
| Flow (MGD)                    | Report  | Report    | N/A         | N/A       | 1/Month       | Instantaneous |
| $BOD_5 (mg/1)$                | N/A     | N/A       | 30          | 45        | 1/Month       | Composite     |
| Total Suspended Solids (mg/l) | N/A     | N/A       | 30          | 45        | 1/Month       | Composite     |
| Escherichia Coli (N/100 ml)   | N/A     | N/A       | 130         | 240       | 1/Month       | Grab          |
| pH (standard units)           | N/A     | N/A       | 6.0 (min)   | 9.0 (max) | 1/Month       | Grab          |

The abbreviation N/A means Not Applicable.

There shall be no discharge of floating solids or visible foam or sheen in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: nearest accessible point prior to discharge to or mixing with the receiving waters or wastestreams from other outfalls.

PART I-Page I-2

Permit No.: KY0080764

AI No.: 1668

### PART I A - EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning on the effective date of this permit and lasting through the term of this permit, the permittee is authorized to discharge from Outfall serial number: Outfall 002 - Total Facility discharge consisting of truck rinsing, fuel island cleaning, storm water runoff, and sanitary wastewater (Internal Outfall 001)

Such discharges shall be limited and monitored by the permittee as specified below:

| EFFLUENT CHARACTERISTICS    | DISCHARGE LIMITATIONS           |        |            |           | MONITORING REQUIREMENTS |               |
|-----------------------------|---------------------------------|--------|------------|-----------|-------------------------|---------------|
|                             | (lbs/day) Other Units (Specify) |        |            |           |                         |               |
|                             | Monthly                         | Daily  | Monthly    | Daily     | Measurement             | Sample        |
|                             | Avg.                            | Max.   | Avg.       | Max.      | Frequency               | Type          |
|                             |                                 |        |            |           |                         |               |
| Flow (0.015 MGD)            | Report                          | Report | N/A        | N/A       | 1/Month                 | Instantaneous |
| Total Suspended Solids      | N/A                             | N/A    | 30         | 45        | 1/Month                 | Grab          |
| Ammonia Nitrogen(as mg/l N) |                                 |        |            |           |                         |               |
| May 1 - October 31          | 0.50                            | 0.75   | 4.0        | 6.0       | 1/Month                 | Composite     |
| November 1 - April 30       | 1.25                            | 1.88   | 10         | 15        | 1/Month                 | Composite     |
| Oil and Grease (mg/l)       | N/A                             | N/A    | 10         | 15        | 1/Month                 | Grab          |
| oll and oldabe (mg, 1)      | 11, 11                          | 11,11  |            |           | 1,11011011              | 010.0         |
| Phenanthrene $(\mu g/1)$    | N/A                             | N/A    | Report     | Report    | 1/Month                 | Grab          |
| Benzene (µq/l)              | N/A                             | N/A    | Report     | Bonort    | 1/Month                 | Grab          |
| Benzene (µg/1)              | AVIA                            | N/A    | Report     | Report    | I/MOIICII               | Grab          |
| Flourene (µg/l)             | N/A                             | N/A    | Report     | Report    | 1/Month                 | Grab          |
| Discolard Owner (may/1)     | 27./2                           | 77./7  | 1          | l 7 O     | 1 /3/                   | Q1-           |
| Dissolved Oxygen (mg/l)     | N/A                             | N/A    | Not less t | nan /.U   | 1/Month                 | Grab          |
| pH (standard units)         | N/A                             | N/A    | 6.0 (min)  | 9.0 (max) | 1/Month                 | Grab          |

The abbreviation N/A means Not Applicable.

There shall be no discharge of floating solids or visible foam or sheen in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: nearest accessible point prior to discharge to or mixing with the receiving waters or wastestreams from other outfalls.

PART I Page I-3

Permit No.: KY0080764 AI No.: 1668

# PART I B - SCHEDULE OF COMPLIANCE

The permittee shall achieve compliance with all requirements on the effective date of this permit.



PART II Page II-1

Permit No.: KY0080764

AI No.: 1668

### PART II - STANDARD CONDITIONS FOR KPDES PERMIT

This permit has been issued under the provisions of KRS Chapter 224 and regulations promulgated pursuant thereto. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits or licenses required by this Cabinet and other state, federal, and local agencies.

It is the responsibility of the permittee to demonstrate compliance with permit parameter limitations by utilization of sufficiently sensitive analytical methods.

The permittee is also advised that all KPDES permit conditions in KPDES Regulation 401 KAR 5:065, Section 1 will apply to all discharges authorized by this permit.

PART III Page III-1

Permit No.: KY0080764

AI No.: 1668

### PART III - OTHER REQUIREMENTS

### A. Reporting of Monitoring Results

Monitoring results obtained during each monitoring period must be reported on a preprinted Discharge Monitoring Report (DMR) Form that will be mailed to you. The completed DMR for each monitoring period must be sent to the Division of Water at the address listed below (with a copy to the appropriate Regional Office) postmarked no later than the 28th day of the month following the monitoring period for which monitoring results were obtained.

Division of Water Louisville Regional Office 9116 Leesgate Road Louisville, Kentucky 40222-5084 ATTN: Supervisor Division of Water Surface Water Permits Branch Permit Support Section 200 Fair Oaks Lane Frankfort, Kentucky 40601

### B. Reopener Clause

This permit shall be modified, or alternatively revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved under 401 KAR 5:050 through 5:086, if the effluent standard or limitation so issued or approved:

- 1. Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
- 2. Controls any pollutant not limited in the permit.

The permit as modified or reissued under this paragraph shall also contain any other requirements of KRS Chapter 224 when applicable.

### C. Outfall Signage

The permittee shall post a permanent marker at all discharge locations and/or monitoring points. The marker shall be at least 2 feet by 2 feet in size and a minimum of 3 feet above ground level with the Permittee Name and KPDES permit and outfall numbers in 2 inch letters. For internal monitoring points the marker shall be of sufficient size to include the outfall number in 2 inch letters and shall be posted as near as possible to the actual sampling location.

PART IV Page IV-1

Permit No.: KY0080764

AI No.: 1668

### PART IV - BEST MANAGEMENT PRACTICES

### SECTION A. GENERAL CONDITIONS

### 1. Applicability

These conditions apply to all permittees who use, manufacture, store, handle, or discharge any pollutant listed as: (1) toxic under Section 307(a)(1) of the Clean Water Act; (2) oil, as defined in Section 311(a)(1) of the Act; (3) any pollutant listed as hazardous under Section 311 of the Act; or (4) is defined as a pollutant pursuant to KRS 224.01-010(35) and who have ancillary manufacturing operations which could result in (1) the release of a hazardous substance, pollutant, or contaminant, or (2) an environmental emergency, as defined in KRS 224.01-400, as amended, or any regulation promulgated pursuant thereto (hereinafter, the "BMP pollutants"). These operations include material storage areas; plant site runoff; in-plant transfer, process and material handling areas; loading and unloading operations, and sludge and waste disposal areas.

## 2. BMP Plan

The permittee shall develop and implement a Best Management Practices (BMP) plan consistent with 401 KAR 5:065, Section 2(10) pursuant to KRS 224.70-110, which prevents or minimizes the potential for the release of "BMP pollutants" from ancillary activities through plant site runoff; spillage or leaks, sludge or waste disposal; or drainage from raw material storage. A Best Management Practices (BMP) plan will be prepared by the permittee unless the permittee can demonstrate through the submission of a BMP outline that the elements and intent of the BMP have been fulfilled through the use of existing plans such as the Spill Prevention Control and Countermeasure (SPCC) plans, contingency plans, and other applicable documents.

### 3. Implementation

If this is the first time for the BMP requirement, then the plan shall be developed and submitted to the Division of Water within 90 days of the effective date of the permit. Implementation shall be within 180 days of that submission. For permit renewals the plan in effect at the time of permit reissuance shall remain in effect. Modifications to the plan as a result of ineffectiveness or plan changes to the facility shall be submitted to the Division of Water and implemented as soon as possible.

### 4. General Requirements

The BMP plan shall:

- a. Be documented in narrative form, and shall include any necessary plot plans, drawings, or maps.
- b. Establish specific objectives for the control of toxic and hazardous pollutants.
  - (1) Each facility component or system shall be examined for its potential for causing a release of "BMP pollutants" due to equipment failure, improper operation, natural phenomena such as rain or snowfall, etc.

PART IV Page IV-2

Permit No.: KY0080764

AI No.: 1668

(2) Where experience indicates a reasonable potential for equipment failure (e.g., a tank overflow or leakage), natural condition (e.g., precipitation), or other circumstances which could result in a release of "BMP pollutants," the plan should include a prediction of the direction, rate of flow, and total quantity of the pollutants which could be released from the facility as result of each condition or circumstance.

- c. Establish specific Best Management Practices to meet the objectives identified under paragraph b of this section, addressing each component or system capable of causing a release of "BMP pollutants."
- d. Include any special conditions established in part b of this section.
- e. Be reviewed by plant engineering staff and the plant manager.

# 5. Specific Requirements

The plan shall be consistent with the general guidance contained in the publication entitled "NPDES Best Management Practices Guidance Document," and shall include the following baseline BMPs as a minimum.

- a. BMP Committee
- b. Reporting of BMP Incidents
- c. Risk Identification and Assessment
- d. Employee Training
- e. Inspections and Records
- f. Preventive Maintenance
- q. Good Housekeeping
- h. Materials Compatibility
- i. Security
- j. Materials Inventory

# 6. SPCC Plans

The BMP plan may reflect requirements for Spill Prevention Control and Countermeasure (SPCC) plans under Section 311 of the Act and 40 CFR Part 151, and may incorporate any part of such plans into the BMP plan by reference.

### 7. Hazardous Waste Management

The permittee shall assure the proper management of solid and hazardous waste in accordance with the regulations promulgated under the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1978 (RCRA) (40 U.S.C. 6901 et seq.) Management practices required under RCRA regulations shall be referenced in the BMP plan.

### 8. Documentation

The permittee shall maintain a description of the BMP plan at the facility and shall make the plan available upon request to NREPC personnel. Initial copies and modifications thereof shall be sent to the following addresses when required by Section 3:

Division of Water Louisville Regional Office 9116 Leesgate Road Louisville, Kentucky 40222-5084 ATTN: Supervisor Division of Water Surface Water Permits Branch Operational Permits Section 200 Fair Oaks Lane Frankfort, Kentucky 40601

PART IV Page IV-3

Permit No.: KY0080764

AI No.: 1668

# 9. BMP Plan Modification

The permittee shall amend the BMP plan whenever there is a change in the facility or change in the operation of the facility which materially increases the potential for the ancillary activities to result in the release of "BMP pollutants."

## 10. Modification for Ineffectiveness

If the BMP plan proves to be ineffective in achieving the general objective of preventing the release of "BMP pollutants," then the specific objectives and requirements under paragraphs b and c of Section 4, the permit, and/or the BMP plan shall be subject to modification to incorporate revised BMP requirements. If at any time following the issuance of this permit the BMP plan is found to be inadequate pursuant to a state or federal site inspection or plan review, the plan shall be modified to incorporate such changes necessary to resolve the concerns.